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ABSTRACT

Preparing the final report for an evaluation project often involves preparation of lengthy tables. To prevent persons from having to retype the data already in a mainframe file and then verify the data, the Evaluation and Assessment Laboratory of the University of Alabama (Tuscaloosa) uses a simple procedure that entails: (1) formatting the output of a Statistical Analysis System (SAS) frequency procedure; (2) downloading the listing to the personal computer; (3) running a BASIC program; (4) editing the file in a text editor; (5) importing the output into WordPerfect; and (6) running WordPerfect macros. The result is a formatted table that has no data errors and is ready for inclusion in a report. The procedure is illustrated using a survey filled out by teachers in a public school system on possible topics for teacher in-service workshops, but the same process is also used for various needs assessment projects. The finished table is included, and an appendix contains the needs assessment. (SLD)

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From SAS Mainframe Listing to WordPerfect Table With No Data Entry

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Introduction

Preparing the final report for many evaluation projects involves the preparation of lengthy tables. When the tables contain the percentages of respondents selecting a certain response from a questionnaire, the task of typing all the data in a word processing program can be onerous and offers many opportunities for errors in data entry. In order to prevent having someone first retype the data already in a mainframe file and then verify the data, the Evaluation and Assessment Laboratory uses a simple procedure that entails formatting the output of a SAS frequency procedure, downloading the listing to the PC, running a BASIC program, editing the file in a text editor, importing the output into WordPerfect, and running WordPerfect macros. The result is a formatted table which has no data errors and is ready for inclusion in the report. The procedure is illustrated in this paper using a survey filled out by teachers in a public school system on possible topics for teacher in-service workshops, but the same process is used for various needs assessment projects.

Mainframe

On a survey of 124 possible topics for teacher in-service workshops, the various items address possible topics. After completing a brief demographic section on a custom-designed answer sheet, the respondents are asked to darken the bubble on the scan sheet for each topic they see as an area of interest or need. A sample of the scan sheet is shown in Appendix A. When the sheets are scanned, the selected responses are coded as "1" and the unmarked responses are coded as "0". Once the data are scanned into a data file, a simple frequency procedure is run giving the percent of respondents marking a topic as one of interest and the percent leaving it blank. In the SAS program, labels are assigned to each of the items and to the category of interest. The label for the category showing the percent selecting the topic as one of interest is formatted to contain an "@" before the number of the item. The label for each item is the topic addressed in that item. A sample of the SAS code is shown below:

```
CMS FILEDEF INDAT DISK XXX DATA A;
CMS FILEDEF SDS DISK DUM DUM A;
PROC FORMAT;
  VALUE I001F  1 = '@001';
  VALUE I002F  1 = '@002';
  VALUE I003F  1 = '@003';
  VALUE I004F  1 = '@004';
       . . .
DATA SDS.XXX;
  INFILE INDAT;
  INPUT POS 1 GRK3 2 GR45 3 GR67 4 GR912 5 SUBJ 6-7 LOCMY 8
       @12 (I001-I124) (1.);
  TITLE 'RESULTS FOR ALL RESPONDENTS';
```

```
LABEL I001 = 'Mainstreaming'
      I002 = 'Behavior Management'
      I003 = 'Classroom Management'
      I004 = 'Developmentally Appropriate Practices'
      . . .
PROC FREQ;
 TABLES I001-I124;
 FORMAT I001 I001F.
      I002 I002F.
      I003 I003F.
      I004 I004F.
      . . .
      I124 I124F.;
```

The SAS program can be modified to give results for all respondents or by the teacher's position, such as Kindergarten through Grade 3 or Junior High. Each listing of interest would then be downloaded. The output of the SAS program appears as follows:

Mainstreaming

I001	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	91	91.0	91	91
@001	9	9.0	100	100.0

Behavior Management (General)

I002	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	67	67.0	67	67
@002	33	33.0	100	100.0

. . .

Other Vocational Ed. Topics

I124	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	97	97.0	97	97
@124	3	3.0	100	100.0

Mainstreaming is the topic listed in item 1. Of the 100 respondents, 9 marked item 1 as a topic of interest for an inservice workshop. The listing containing the topic addressed and the frequency of responses with an "@" plus the item number for the responses coded "1" indicating the percent of respondents selecting the topic as an area of interest is downloaded to the PC.

PC - BASIC

The formatted mainframe listing is the input file for a simple BASIC program. This program contains a data statement for each item on the survey (e.g. each topic identified as possibly being of interest). The output file contains a heading followed by the number and the percent of respondents selecting the topic and the name of the item from the data statements. A sample of the BASIC program is listed below:

```
10 OPEN "XXX.LST" FOR INPUT AS 1
20 OPEN "XXX.OUT" FOR OUTPUT AS 2
30 LINE INPUT #1, A$: PRINT #2, MID$(A$,2,70)
40 DIM TOPIC$(124)
41  DATA "Mainstreaming"
42  DATA "Behavior Management (General)"
43  DATA "Classroom Management"
44  DATA "Developmentally Appropriate Practices"
45  DATA "Group Management"
46  DATA "Integrating the Curriculum"
47  DATA "Critical Thinking Skills"
48  DATA "Teaching and Learning Styles"
49  DATA "Building Self-Esteem"
. . .
168 FOR J=1 TO 124: READ TOPIC$(J):NEXT J
169 IF EOF(1) THEN 970
910 LINE INPUT #1, a$
920 IF MID$(A$,2,1) < > "@" THEN 960
941 PRINT #2, MID$(A$,13,4) SPC(3);
950 PRINT #2, MID$(A$,22,4) SPC(5);
955 PRINT #2,TOPIC$(VAL(MID$(A$,3,3)))
960 GOTO 169
970 CLOSE:END
```

The output file created by the BASIC program resembles the listing on the following page.

RESULTS FOR ALL RESPONDENTS

67	9.1	Mainstreaming
33	33.0	Behavior Management (General)
575	28.3	Classroom Management
133	6.7	Developmentally Appropriate Practices
166	8.4	Group Management
600	29.7	Integrating the Curriculum
588	29.0	Critical Thinking Skills
533	26.3	Teaching and Learning Styles
673	33.0	Building Self-Esteem
306	15.2	Middle School Practices
268	13.3	Drop-Out Prevention
359	18.0	Cooperative Learning
194	9.8	Assessment (General)
640	31.6	Make and Take
264	13.1	Subject Related Careers
481	23.4	Violence Prevention
216	10.9	Conferencing Skills
143	7.2	Site-Based Management
223	11.2	Administrative Uses of Computers
155	7.7	Scheduling
573	27.9	Update on Laws (General)
268	13.4	Evaluation Procedures
64	3.2	Clinical Supervision
255	12.9	Life Science
215	10.8	Earth Science
635	31.4	Demonstration/Hands on
108	5.5	Physical Science
138	7.0	Space Science
69	3.5	Lab Organization/Safety
25	1.3	Other Science Topics
281	14.2	Teaching Basic Operations (+,-,*,/)
515	25.6	Word Problems/Problem Solving
119	6.0	Geometric Connections
125	6.3	Geometric Concepts
95	4.8	Strategies in Teaching Algebra

PC - WordPerfect

The BASIC output file is brought into a text editor (i.e, KEDIT) where it is sorted by the number of respondents selecting each topic; therefore, the topics will appear in order from most important to least important. Then a global change is done to replace strings of blanks with a percent sign. This sorted and reformatted file is imported into WordPerfect where the percent signs are replaced by tabs. All the tables are retrieved into one document. The heading for the tables is retrieved into document 2 which appears below.

Table X
Workshop Topics Selected by
< >

N	%	Topic

Document 2

A WordPerfect macro searches document 1 for RESULTS FOR which are the first words of each table. The macro deletes RESULTS FOR and replaces it with the heading leaving the group for which the table contains the results as the first line of the table. The last line of the heading < > is then pulled from the first line of table.

To put the graphics line at the bottom of each table, another macro is run. At this point document 2 contains a blank line and a graphics line. A WordPerfect macro searches for a hard page in document 1, switches to document 2, copies the blank line and the graphics line to document 1, and repeats the procedure until each table has a blank line and a graphics line at the bottom.

Only the appropriate number for the table needs to be entered by hand.

The final output in WordPerfect would be the table on the following page.

The time required to run this procedure for several subgroups of the respondents is significantly less than the time required to enter each table individually and then check the data. The initial time spent in writing the SAS program, the BASIC program, and the WordPerfect macro is a good investment, as the programs can be used for different projects with only minor modifications to the SAS formatting and the BASIC data statements.

Table 6
Workshop Topics Selected by
All Respondents Combined

N	%	Topic
922	44.3	Behavior Management (General)
673	33.0	Building Self-Esteem
640	31.7	Hands-on Activities
640	31.6	Make and Take
635	31.4	Demonstration/Hands on
600	29.7	Integrating the Curriculum
588	29.0	Critical Thinking Skills
588	29.3	Whole Language
575	28.3	Classroom Management
573	27.9	Update on Laws (General)
533	26.3	Teaching and Learning Styles
515	25.6	Word Problems/Problem Solving
503	25.2	Manipulatives
481	23.4	Violence Prevention
466	23.3	Listening Skills
437	21.8	Improving Reading Comprehension
411	20.6	Introduction to computers
408	20.5	Integrating Reading
407	20.2	Stress Management
373	18.8	Attention Deficit Disorder
359	18.0	Cooperative Learning
356	17.9	Storytelling
354	17.7	Improved Listening/Speaking Skills
351	17.6	Encouraging Students to Read
350	17.5	Writing across the Curriculum
334	16.8	Activities for Teaching Health
306	15.2	Middle School Practices
298	14.9	At Risk Students
296	14.9	Process Writing
295	14.8	Vocabulary Development
281	14.2	Teaching Basic Operations (+,-,*,/)
270	13.7	Health Issues(Elementary)
268	13.4	Evaluation Procedures

Appendix A

Birmingham Public Schools
Staff Development Needs Assessment

Schools for the Future

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POSITION

Darken your primary personnel assignment.

- ○ REGULAR CLASSROOM TEACHER
- ○ SPECIAL EDUCATION TEACHER
- ○ LIBRARIAN
- ○ GUIDANCE COUNSELOR
- ○ ADMINISTRATOR
- ○ OTHER

GRADE LEVEL

Darken all levels that apply.

- ○ K-3
- ○ 4-5
- ○ 6-8
- ○ 9-12

SUBJECT AREA

Darken only one.

- ○ SELF CONTAINED
- ○ BUSINESS/VOC/AG
- ○ MUSIC/ART
- ○ SCIENCE
- ○ MATHEMATICS
- ○ SOCIAL STUDIES
- ○ HEALTH/PE
- ○ FOREIGN LANGUAGE
- ○ COMPUTER SCIENCE
- ○ LANGUAGE ARTS
- ○ OTHER

Use a No. 2 Pencil Only

LOCATION

Darken the location(s) at which you prefer to attend workshops.

- ○ MY SCHOOL
- ○ CENTRAL LOCATION IN SCHOOL SYSTEM
- ○ CENTRAL LOCATION OUTSIDE SCHOOL SYSTEM

TIME

Darken the one time most convenient for you to attend a workshop.

- ○ SCHOOL YEAR/ AFTER SCHOOL
- ○ SCHOOL YEAR/ SATURDAY
- ○ SUMMER

INSTRUCTIONS

For the general topics listed in this box and the subject area topics listed on the back of this form, darken those you would be interested in attending.

- ○ Mainstreaming
- ○ Behavior Management
- ○ Classroom Management
- ○ Developmentally Appropriate Practices
- ○ Group Management
- ○ Integrating the Curriculum
- ○ Critical Thinking Skills
- ○ Teaching and Learning Styles
- ○ Building Self-Esteem
- ○ Middle School Practices
- ○ Drop-Out Prevention
- ○ Cooperative Learning
- ○ Assessment
- ○ Make and Take
- ○ Subject Related Careers
- ○ Violence Prevention
- ○ Conferencing Skills
- ○ Site-Based Management
- ○ Administrative Uses of Computers
- ○ Scheduling
- ○ Update on Laws
- ○ Evaluation Procedures
- ○ Clinical Supervision

Write in Topic(s) Not Listed on this Form.

SCIENCE

- ○ Life Science
- ○ Earth Science
- ○ Demonstration/ Hands On
- ○ Physical Science
- ○ Space Science
- ○ Lab Organization/ Safety
- ○ Other

MATHEMATICS

- ○ Teaching Basic Operations (+,-,x,÷)
- ○ Word Problems/ Problem Solving
- ○ Mathematical Connections
- ○ Geometric Concepts
- ○ Strategies in Teaching Algebra
- ○ Manipulatives
- ○ Statistics/Probability
- ○ Measurement
- ○ Patterns/Relationships
- ○ Decimals/Percents
- ○ Functions
- ○ Remediation
- ○ Discrete Mathematics
- ○ Underpinnings of Calculus
- ○ Other

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LANGUAGE ARTS

- ○ Integrating Reading
- ○ Writing Across the Curriculum
- ○ Process Writing
- ○ Reading in the Content Area
- ○ Improving Reading Comprehension
- ○ Vocabulary Development
- ○ Whole Language
- ○ Shared Reading
- ○ Improved Listening/ Speaking Skills
- ○ Foreign Language/ESL Techniques
- ○ Literature
- ○ Other

SOCIAL STUDIES

- ○ Biographies and Documents in History
- ○ Global Education
- ○ Practical Economics
- ○ Responsible Citizenship thru Law Related Educ.
- ○ Sociology/Learning to Live Together
- ○ Anthropology in Alabama
- ○ Hands-On Activities
- ○ Other

SPECIAL EDUCATION

- ○ Attention Deficit Disorder
- ○ Gifted
- ○ Learning Disabled
- ○ Emotional Conflict
- ○ Sensory Impaired
- ○ Assessment
- ○ Communicative Disorders
- ○ Update on Laws
- ○ Brain Injured Child
- ○ EMR
- ○ TMR
- ○ Behavior Management in SPE
- ○ Other

HEALTH

- ○ Stress Management
- ○ Health Issues for Teenagers
- ○ Health Issues (Elementary)
- ○ Activities for Teaching Health
- ○ Other

LIBRARY

- ○ Effective use of Library/Equipment
- ○ Encouraging Students to Read
- ○ Available Resources

COMPUTER SCIENCE

- ○ Introduction to Computers
- ○ Word Processing
- ○ Data Base
- ○ Spread Sheet
- ○ Classroom Management Utilities
- ○ Programming
- ○ Word Perfect
- ○ Teaching Computer Literacy
- ○ MECC Pgms/Computers as Instructional Tools
- ○ AP Computer Science
- ○ Other

GUIDANCE & COUNSELING

- ○ Interpreting Test Scores
- ○ Career Development
- ○ Conferencing with Parents
- ○ Peer Pressure
- ○ Drug Abuse
- ○ At Risk Students
- ○ Suicide
- ○ Dealing with Parents' Divorce
- ○ Other

SPEECH ARTS

- ○ Listening Skills
- ○ Voice & Diction
- ○ Storytelling
- ○ Readers Theatre
- ○ Oratorical
- ○ Debate
- ○ Dramatics

VISUAL ARTS

- ○ Gallery Tours of Museums
- ○ Assessment in visual Arts
- ○ Middle School Art

MUSIC

- ○ General
- ○ Choral
- ○ Band
- ○ String

VOCATIONAL ED.

- ○ Integration of Curriculum
- ○ Articulation
- ○ Placement
- ○ Other

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